CLAIMS

1.   A planning apparatus comprising:

means for displaying a visual representation of a plurality of schedule elements along a time line;

means for enabling manipulation, by a user, of relative positions and extents of the plurality of schedule elements along the time line to form a plan;

a database of relationship data including interdependencies and planning constraints between specified ones of the schedule elements;

a domain-specific knowledge database of outcome measures providing quantitative or qualitative measures of outcomes consequent on specific schedule elements or specific combinations, sequential or otherwise, of schedule elements on the plan according to a predetermined domain of use of the planning apparatus;

means for displaying, during or after manipulation of events by the user, selected outcome measures resulting from the specific sequence of schedule elements currently displayed.

2.   Apparatus according to claim 1 in which the schedule elements comprise any of planned actions, past actions, anticipated events, past events, events or actions instantaneous in time, and events or actions extended in time.

3.   Apparatus according to claim 1 in which the means for manipulating comprises means for "clicking and dragging" displayed events on a computer screen.

4.   Apparatus according to claim 1 in which the database of relationship data including interdependencies and planning constraints between specified

ones of the scheduled events includes rules specifying any of the following: mutual exclusivity of specified event combinations, forced sequentiality of specified event combinations; commutativity or non-commutativity of specified events; consequences of events dependent upon prior, subsequent

5   or simultaneous events.

5.   Apparatus according to claim 1 in which the database of outcome measures providing quantitative or qualitative measures of outcomes consequent on specific scheduled events or specific combinations of events

10   includes any of the following: predicted or predetermined measures of risk, cost or benefits, measures of desirability of a plan or plan element, potential conflict within the plan and logical arguments for and/or against a current plan configuration.

15   6.   Apparatus according to claim 1 or claim 5 further including means for selecting for display one or more of said outcome measures from a selection of possible outcome measures.

7.   Apparatus according to claim 6 further including a plurality of

20   domain-specific knowledge databases, said means for selecting including means for enabling access to different ones of the plurality of domain-specific knowledge databases.

8.   Apparatus according to claim 1 further including means for

25   displaying logical arguments for and against each event or combination of events in the displayed visual representation of the plan.

9.   Apparatus according to claim 8 further including means for indicating a quantitative measure of the strength of said logical arguments.

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10.   Apparatus according to claim 1 further including means for displaying recommended actions arising in respect of each event or combination of events in the displayed visual representation of the plan.

5   11.   Apparatus according to claim 1 further including means to display said selected outcome measures graphically.

12.   Apparatus according to claim 1 further including means to display said selected outcome measures graphically and coincident with the time

10   line of the scheduled events.

13.   Apparatus according to claim 4 further including means for applying information from the database of relationship data to display interactions between said events or violations of interdependencies or planning

15   constraints.

14.   Apparatus according to claim 5 in which the database of outcome measures provides said quantitative or qualitative measures of outcomes consequent on specific scheduled events or specific combinations of events

20   as dynamic information, the database further comprising static instance measures data applicable to the plan as a whole.

15.   Apparatus according to claim 1 in which the scheduled events relate to medical interventions applied to a patient.

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16.   Apparatus according to claim 12 in which the outcome measures include quantitative measures of risk of development of certain medical conditions by a patient.

30   17.   A planning apparatus comprising:

means for displaying a visual representation of a plurality of schedule elements along a time line;

means for enabling manipulation, by a user, of relative positions and extents of the schedule elements along the time line to form a plan;

5   an instance database storing data defining the schedule elements of the current plan and session data specific to that plan;

means for enabling selection, by a user, of a domain in which the plan is effected, the selected domain determining the schedule elements available to form the plan;

10   means for accessing a domain-specific knowledge database of predetermined outcome measures so as to provide quantitative or qualitative measures of outcomes consequent on the schedule elements selected in the current plan and the positioning thereof;

means for displaying, during or after manipulation of events by the 15 user, selected outcome measures resulting from the current configuration of schedule elements in the plan.

18.   The apparatus of claim 17 in which the outcome measures displayed include quantitative measures of predicted risk levels associated with the 20 plan or plan elements or measures of desirability of the current plan or plan elements.

19.   The apparatus of claim 17 in which the outcome measures displayed include qualitative measures comprising logical arguments for or against the 25 current plan configuration.

20.   The apparatus of claim 17 in which the outcome measures displayed include qualitative measures comprising recommended actions arising from the current plan configuration.

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21.   A method for automatically determining a level of desirability of a plan comprising a plurality of schedule elements along a time line, the method comprising the steps of:

     displaying, on a computer apparatus, a visual representation of said
5   plurality of schedule elements along the time line;

     enabling manipulation, by a user, of relative positions and extents of the schedule elements along the time line to form said plan;

     accessing a database of relationship data including interdependencies and planning constraints between specified ones of the schedule elements to
10   automatically indicate, on the computer display, conflicts between plan elements;

     accessing a domain-specific knowledge database of outcome measures providing quantitative or qualitative measures of outcomes consequent on specific schedule elements or specific combinations,
15   sequential or otherwise, of schedule elements on the plan according to a predetermined domain of use of the planning apparatus to automatically determine selected outcome measures resulting from the current plan configuration being displayed; and

     displaying, during or after manipulation of events by the user, said
20   selected outcome measures.

22.   A method for automatically determining a level of desirability of a plan comprising a plurality of schedule elements along a time line, the method comprising the steps of:

25   displaying, on a computer apparatus, a visual representation of said plurality of schedule elements along the time line;

     enabling manipulation, by a user, of relative positions and extents of the schedule elements along the time line to form a plan;

     storing, in an instance database, data defining the schedule elements
30   of the current plan and session data specific to that plan;

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enabling selection, by a user, of a domain in which the plan is effected, the selected domain automatically determining the schedule elements available for use to form the plan;

accessing a domain-specific knowledge database of predetermined
5   outcome measures so as to automatically provide quantitative or qualitative measures of outcomes consequent on the schedule elements selected in the current plan and the positioning thereof; and

displaying, during or after manipulation of events by the user, selected said outcome measures resulting from the current configuration of
10   schedule elements in the plan.

23.   A computer program product, comprising a computer readable medium having thereon computer program code means adapted, when said program is loaded onto a computer, to make the computer execute the
15   procedure of either one of claims 21 and 22.

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